DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISRATION

R00002RC
Initial Issue
Global Helicopter
Technology, Inc.
U.S. Army UH-1H

September 20, 2001

TYPE CERTIFICATE DATA SHEET NO. R00002RC

This data sheet, which is part of Type Certificate No. R00002RC, prescribes conditions and limitations under which the product for which the type certificate was issued, meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Global Helicopter Technology, Inc.
5070 South Collins, Suite 206
Arlington, Texas 76018

1- Model UH-1H, (Utility Helicopter, Restricted Category), Approved: September 20, 2001
(**See note 16** regarding aircraft, engines and appliances and **note 18** regarding definition of type design configuration)

Engine: Lycoming T53-L-13B (**See note 15** for alternate engines)

Fuel: MIL-T-5624, Grade JP-5 (Jet A)
(**See note 13** for alternate and emergency fuels)

Engine Limits: T53-L-13B: (**See note 15** for alternate engines)

	Torque Press (PSI)	Output Horsepower (HP)	Output RPM	Exhaust Gas Temp (C degrees)	Gas generator Speed N1 (%)
Maximum Cont.	50.0	1100	6600	610	101.5
Take-Off (30 minutes)	50.0	1100	6600	610 to 625	101.5
Start and Accel (10 sec)	50.0	1100	6600	625-675	101.5
Start and Accel (5 sec)	50.0	1100	6600	675-760	101.5
Maximum	50.0	1100	6600	760	101.5

See notes 11 & 12. Refer to Operation's Manual TM55-1520-210-10 for additional limitation data.

Rotor Speed Limits:

	Power Off	Power On
Maximum rpm	339	324
Minimum rpm	294	294

Continuous operation: 294-324 RPM / Maximum for auto-rotation is 339 RPM

Transmission
Torque Limits: Fifty (50.0) calibrated PSIG (**See note 11**)

Airspeed Limits:

Roof-Mounted pitot static:
Never exceed 124 knots (143 mph) up to 7500 lbs. Gross Weight, sea level to 2000 feet. Never exceed 113 knots (132 mph) up to 9500 lbs. Gross Weight, sea level to 2000 feet. **See Note 2** and refer to TM55-1520-210-10, Chapter 5, Section X, for specific operating airspeed limitations.

Nose mounted pitot static:
Never exceed 112 knots (128 mph) up to 7500 lbs. Gross Weight, sea level to 2000 feet. Never exceed 103 knots (118 mph) up to 9500 lbs. Gross weight, sea level to 2000 feet. **See Note 2** and refer to TM55-1520-210-10, Chapter 5, Section X, for specific operating airspeed limitations.

Center of Gravity (CG) Range:

Longitudinal CG Limits (+130.0) to (+144.0)
Lateral CG Limits: Plus or minus 5 inches
Refer to U. S. Army TM55-1520-210-10, Chapter 6, Section VII, for specific CG ranges and limits.

Datum:

Station 0, datum is 7.6 inches, aft of the most forward point of the fuselage nose section (See U.S. Army TM55-1520-210-10, chapter 6).

Leveling Means:

Plumb line from top of cabin doorframe to index plate on cabin floor.
See Note 1.

Empty Weight (CG) Range:

Refer to specific Aircraft Maintenance log for empty weight CG determined as prescribed per U.S. Army Aviation Maintenance Engineering Manual Weight and Balance TM55-1500-342-23.

Maximum Weight:

9500 lbs.

Minimum Crew:

1 (Pilot)

No. of Seats:

Crew only as required to perform restricted category mission in accordance with FAR 133.1(b), with appropriate seats and restraints (See U.S. Army TM-55-1520-210-10). Passengers cannot be transported during restricted category flight operations (see FAR 91.313)

Maximum Baggage:

100 lbs. Per sq. Ft. on cabin floor as required to perform restricted category mission in accordance with FAR 133.1(b). (See U.S. Army TM55-1520-210-10)

Fuel Capacity:

Crashworthy system: 208.5 U.S. gals. (+151.6) Unusable-2 U.S. gals.
Non-Crashworthy system: 220 U. S. gals. (+151.6) Unusable 2 U.S. gals.

Oil Capacity:

Engine: 3.25 gals. (+173.0)
Transmission: 11.0 U.S. quarts
Hydraulic: 10.0 U.S. pints

Maximum Operation Altitude:

Refer to U.S. Army TM-55-1520-210-10 Chapter 7, Performance Data Charts

Rotor Blade and Control Movement:

For rigging information, refer to U.S. Army TM55-1520-210-23 Chapter 11 (Maintenance Manual):

Eligible Serial No.: Global Helicopter Technology, Inc. FAA approved Serial Number Eligibility List Report number GHT-01-412-SN dated July 23, 2001 or later FAA approved revision

Certification Basis: FAR 21.25(a)(2), effective February 1, 1965, for the special purpose of External Load Operations under FAR 21.25(b)(7) (**See note 17**). Repetitive high torque cycle events beyond the following are not approved:

(a) Two (2) Ground-Air-Ground (GAG) Cycles per Flight hour from rotors stopped to Flight Conditions to rotors stopped.

(b) our (4) GAG Cycles per flight hour from rotors turning at ground idle (at 0% rpm) to flight conditions to rotors turning at ground idle (at 100% rpm).

GAG cycles in (a) and (b) above shall be applied independently

In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external load operations excepted by FAR 36.1(a)(4) and defined under FAR 133.1(b). Any alteration to the aircraft for Special Purposes not identified above require further FAA approval and in addition, may require noise and / or flight testing.

The aircraft certified under this type certification is accepted under the concept of limited exposure associated with escape from inadvertent ice encounters and is prohibited against flight into known icing. This Aircraft must be reevaluated if certification to the General Ice Protection Airworthiness Regulations is requested.

Any Subsequent modifications are to meet FAR 29 Airworthiness standards, transport category Rotorcraft, as of Amendment Number 1, effective August 12, 1965 and FAR 29.1529, instructions for Continued Airworthiness, Amendment number 20, effective September 11, 1980.

Date of Application: November 29, 2000

Production Basis: None. No helicopters may be produced under this approval. **(See Note 4)**

Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be in each helicopter for certification. The following equipment and documents must be available in each helicopter for certification:

(a) U.S. Army TM55-1520-210-10, Operator's Manual, UH-1H.

(b) Standard U. S. Army cargo suspension system installation, part numbers 204-070-900-5, 204-070-900-19, IAW TM55-1520-210-23P (Parts Manual), installed and maintained IAW TM55-1520-210-23 (Maintenance Manual), and operated IAW TM55-1520-210-10 (Operators Manual) for all external cargo operations.

Notes

Note 1: A current weight and balance report including a list of equipment included in the certificated empty weight, and loading instuctions, when necessary, must be provided for each aircraft at the time of original certification. Refer to Operation's Manual, TM55-1520-210-10, Chapter 6, and Maintenance Manual, TM55-1520-210-23-1 Para. 1-38, for leveling means and weight and balance determination.

Note 2: The following placards must be prominently displayed in the cabin in clear view of the pilot:

Placard No. 1

"THIS HELICOPTER MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313."

Placard No. 2

"THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATION'S MANUAL. REFER TO TM55-1520-210-10, CHAPTER 5 OPERATING LIMITS AND RESTRICTIONS."

Placard No. 3

CALIBRATED AIRSPEED-KNOTS
With Roof-mounted pitot static

LIMITS: ACFT WT/KIAS

GROSS WEIGHT

DENSITY ALT(FT)	To 7500(lbs)	8500(lbs)	9500(lbs)
SL TO 2000	124	118	113
3000	121	115	110
6000	112	106	101
9000	103	97	92
12000	94	88	83
15000	82	---	---
18000	70	---	---

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- **UNDER 7500 LBS USE 6000 TO 6600 RPM RANGE**
- **OVER 7500 LBS GW USE 6400 TO 6600 RPM RANGE**
- **POWER OFF 294 TO 339 ROTOR RPM**
- **REDUCE SPEED WHEN VIBRATION IS EXCESSIVE**

CALIBRATED AIRSPEED-KNOTS
With Nose-mounted pitot static

LIMITS: ACFT WT/KIAS

GROSS WEIGHT

DENSITY ALT(FT)	To 7500(lbs)	8500(lbs)	9500(lbs)
SL TO 2000	112	107	103
3000	109	104	100
6000	100	95	91
9000	91	86	82
12000	82	77	73
15000	70	65	---
18000	58	---	---

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- **UNDER 7500 LBS USE 6000 TO 6600 RPM RANGE**
- **OVER 7500 LBS GW USE 6400 TO 6600 RPM RANGE**
- **POWER OFF 294 TO 339 ROTOR RPM**
- **REDUCE SPEED WHEN VIBRATION IS EXCESSIVE**

Placard No. 4

"EXTERNAL LOAD OPERATIONS: Vne WILL BE DETERMINED FOR EACH PROPOSED EXTERNAL LOAD APPLICATION."

Note 3: The helicopter(s) must be serviced, maintained, inspected and overhauled in accordance with the documents specified in Instructions for Continued Airworthiness Report GHT-01-412-201, dated July 23, 2001 (or later FAA accepted revision) or other FAA accepted inspection programs. The TC holders instructions for Continued Airworthiness Report is part of the TC holders Instructions for Continued Airworthiness.

Note 4: Prior to obtaining an original Airworthiness Certificate:

(a) Each helicopter must pass a conformity inspection in accordance with Global Helicopter Technology, Inc. Configuration Report (Report Number) dated (Report Date). The Configuration Report must contain a complete description of each helicopter, any Military Maintenance Work Orders accomplished on that particular helicopter. In addition, each helicopter must pass an inspection for any possible hidden damage and the military records reviewed for acceptability for any repairs or alterations.

(b) The maintenance, overhaul, and modification records of each helicopter must be reviewed for military changes that may effect the airworthiness of the helicopter.

(c) After the required inspections, the aircraft must be found to be in a good state of preservation, adequate repair, and in a condition for safe operation.

Note 5: This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owners/operator's business which is other than air transportation.

Note 6: Restricted category aircraft may not be operated in a foreign country without the express written approval of the country.

Note 7: This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed Airworthiness Code as provided by Annex 8, to the Convention on International Civil Aviation.

Note 8: Engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The replacement engine must have proper military records and have the applicable FAA Airworthiness inspections and Airworthiness Directives (AD) accomplished.

Note 9: The Airworthiness Directives for the helicopter and engine contained in GHT-01-412-202, Airworthiness Directive Report, dated February 6, 2001, (or later FAA approved revision), must be complied with prior to original certification.

Note 10: The cargo suspension assembly (cargo external load hook and release system) shall be installed, tested and maintained in accordance with TM 55-1520-210-23-2, Chapter 14, paragraph 14-260.

Note 11: Torque pressure output by the engine torque sensing system varies with individual engines. A calibration of this value is required on each engine and the value corresponding to take-off power is stamped on the engine data plate.

Note 12: Maximum permissible exhaust gas temperature varies with ambient temperature as described in the Operator's Manual. Check engine EGT by use of Health Indicator Test (HIT) prior to takeoff (see U.S. Army TM55-1520-210-10 and HIT EGT Log for the aircraft).

Note 13: Alternate and emergency fuels are listed in U.S. Army TM55-1520-210-10, Chapter 2, Paragraph 2-89 and Table 2-1. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in the above U.S. Army TM paragraph.

Note 14: Bell Helicopter Textron, Inc. is not involved with this Type Certificate. Global Helicopter Technology, Inc. is the original holder of this TC Number.

Note 15: Alternate engines:

Lycoming T53-L-13BA

Alternate engines must be installed and operated in accordance with U.S. Army TM55-1520-210-10 Operator's Manual.

Note 16: Aircraft, aircraft engines and appliances that cannot provide documentation with satisfactory service history showing they were surplused from an Armed Force of the United States are not eligible under this type certificate.

Note 17: For External Load Operations under FAR 21.25 (b)(7), the rotorcraft must have external cargo hook assembly P/N 204-072-024-1 installed on model UH-1H as part of the military configuration. Continued airworthiness of the cargo hook and release installation shall be in accordance with TM55-1520-210-23-2, Chapter 14, Paragraph 14-260.

Note 18: This type certificated design is the US Army configuration at the time of the issuance of this type certificate as defined by the US Army documents listed in the Instructions for Continued Airworthiness (ICA) Report GHT-01-412-201, dated July 23, 2001(or later FAA accepted revision). All U.S. Army manuals listed in this type certificate data sheet are defined as of those revisions and dates listed in the above FAA accepted ICA.

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